

South Dakota State University

Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange

Department of Economics Research Reports

Economics

6-15-1992

South Dakota Agricultural Land Values and Rental Rates: 1992

Larry Janssen

South Dakota State University

Follow this and additional works at: http://openprairie.sdstate.edu/econ_research

 Part of the [Agricultural Economics Commons](#)

Recommended Citation

Janssen, Larry, "South Dakota Agricultural Land Values and Rental Rates: 1992" (1992). *Department of Economics Research Reports*. Paper 37.

http://openprairie.sdstate.edu/econ_research/37

This Article is brought to you for free and open access by the Economics at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in Department of Economics Research Reports by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.

SOUTH DAKOTA AGRICULTURAL
LAND VALUES AND RENTAL RATES: 1992*

by

DR. LARRY JANSSEN & DR. BURTON PFLUEGER**

Economics Research Report 92-1

June 1992

*The authors wish to express their appreciation to the 258 survey respondents who participated in this second annual South Dakota Farm Real Estate Market Survey. Without their responses, this report would not be possible.

We express our thanks to Karen Brovold, undergraduate assistant for survey preparation, data processing assistance, and preparation of several tables. Thanks also to Economics secretarial staff members (Verna Clark, Penny Stover, and Jan Liebsch) for support with mailing lists, typing figures and collating this report.

Finally, we express our thanks to Dr. Richard Shane and Dr. Don Peterson, SDSU Economics Extension Specialists, for their review and comment on an earlier draft copy.

**Professor and Associate Professor of Economics, South Dakota State University. Dr. Janssen has teaching and research responsibilities in agricultural finance, agricultural policy, and farmland markets. Dr. Pflueger is SDSU Extension Farm Financial Management Specialist.

SOUTH DAKOTA AGRICULTURAL LAND VALUES AND RENTAL RATES: 1992
RESULTS FROM THE 1992 SDSU SOUTH DAKOTA FARM REAL ESTATE SURVEY

TABLE OF CONTENTS

	<u>Page</u>
SUMMARY.....	1
INTRODUCTION	3
SOUTH DAKOTA FARMLAND VALUE TRENDS, 1970 - 1992	4
1992 SOUTH DAKOTA AGRICULTURAL LAND VALUES AND VALUE CHANGES	7
LAND VALUE AND VALUE CHANGES BY TYPE OF LAND AND REGION	11
Dryland (nonirrigated) Cropland and Hayland Values	11
Native Rangeland and Tame Pastureland Values	12
Irrigated Land Values	12
REGIONAL LAND VALUES BY AGRICULTURAL LAND USE AND LAND PRODUCTIVITY	14
AGRICULTURAL LAND VALUES BY REGION AND COUNTY CLUSTERS	15
MAJOR REASONS FOR CHANGING FARMLAND MARKET CONDITIONS.....	20
1992 CASH RENTAL RATES OF SOUTH DAKOTA'S AGRICULTURAL LAND	23
Cash Rental Rates - Cropland,Hayland and Irrigated Land.....	23
Cash Rental Rates - Rangeland and Pastureland	24
RATES OF RETURN TO AGRICULTURAL LAND	30
AGRICULTURAL LAND VALUE EXPECTATIONS FOR 1991	31
LIST OF REFERENCES	34
APPENDIX: SURVEY METHODS AND RESPONDENT CHARACTERISTICS	34

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Agricultural Regions of South Dakota	5
2. South Dakota Farmland Values, 1970 - 1992	5
3. U.S. and State Farm Real Estate Market Trends, 1987-1992.....	6
4. Average Value of South Dakota's Agricultural Land February 1, 1992 and 1991, and Percent Change from One Year Ago	9
5. Average Value of South Dakota Dryland Cropland, Irrigated Land and Hayland, by Region, February 1992, Dollars per Acre	10
6. Average Value of South Dakota Rangeland and Tame Pasture, by Region, February 1992, Dollars per Acre	10
7. Reasons for Buying Farmland.....	22
8. Reasons for Selling Farmland.....	22
9. Average Cash Rental Rate of South Dakota Dryland Cropland, Irrigated Land and Hayland, by Region, 1992, Dollars per Acre	25
10. Average Cash Rental Rate of South Dakota Rangeland and Pastureland, by Region, 1992, Dollars per Acre and Dollars per AUM	25

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Average Reported Value of South Dakota Agricultural Land by Type of Land by Region, February 1992 and 1991, and Percent Change from 1991.....	13
2. Average Reported Value of South Dakota Agricultural Land by Type of Land and Land Productivity, by Region, February 1, 1992	16
2A. Average Reported Value Per Acre of Agricultural Land by South Dakota Region and County Clusters, by Type of Land and Land Productivity, February 1, 1992	17
3. Reported Cash Rental Rates of South Dakota Agricultural Land by Type of Land by Region, 1992 and 1991 Rates	26
3A. Reported Cash Rental Rates of South Dakota Agricultural Land by Type of Land by Region and County Clusters, 1992 and 1991 Rates	27
4. Estimated Rates of Return to South Dakota Agricultural Land by Type of Land by Region	33
 <u>Appendix Table</u>	
1. Selected Characteristics of Respondents	36

SOUTH DAKOTA AGRICULTURAL LAND VALUES AND RENTAL RATES, 1992:

RESULTS FROM THE SDSU SOUTH DAKOTA FARM REAL ESTATE MARKET SURVEY

by Dr. Larry Janssen and Dr. Burton Pflueger

SUMMARY

South Dakota's agricultural land values increased 3.4% in 1991, paced by strong increases in farmland values in the north central region. Farmland values declined slightly (-1.1%) in the southeast region, the only region with reported declines. Average agricultural land values (as of February 1, 1992) vary from \$533 per acre in the southeast region, to \$225 per acre in the central region to \$95 per acre in northwest South Dakota. These are key findings from the SDSU 1992 South Dakota Farm Real Estate Market Survey reports.

In each region, per acre values are highest for irrigated land, followed in descending order by nonirrigated cropland, hayland or tame pasture, and native rangeland. For each land use, per acre land values are highest in the southeast region, followed by land values in the east central and northeast regions. The lowest average land values, for each agricultural land use, are found in western South Dakota.

Average nonirrigated cropland values vary from \$616 per acre in the southeast region, to \$287 - \$342 per acre in the central regions of the State, to \$167 per acre in northwestern South Dakota. Average cropland values exceed \$800 per acre in a few counties in southeast and east central South Dakota. Average rangeland values vary from about \$270 per acre in the southeast and east central regions to about \$74 - \$80 per acre in western South Dakota.

Substantial variation in land values exist for each land use within each region. For each land use, the average value of higher productivity land was 50% - 90% above the average value of lower productivity land and 12% - 30% above the reported average value of average quality land in the same region.

Average cash rental rates per acre vary substantially by region and land use. For example, nonirrigated cropland cash rental rates vary from \$63 - \$65 per acre in a few counties of southeastern South Dakota, to \$15.10 - \$17.70 per acre in western South Dakota. Rangeland cash rental rates vary from about \$19.60 per acre in the east central region to \$4.90 - \$5.30 per acre in western South Dakota.

From 1991 to 1992, cash rental rates increased more than 10% for nonirrigated cropland in western South Dakota and for rangeland in northwestern region of South Dakota. In most other regions, cropland and rangeland rental rates per acre did not change very much. Hayland cash rental rates declined in most regions, reflecting lower hay prices. Irrigated land rental rates increased an average \$6 - \$10 per acre in western, central and northeast regions of South Dakota.

Average cash rental rates per AUM (Animal Unit Month) for grazing land are fairly uniform across regions (\$12.50 - \$15.50 per AUM). In most regions, this represents a rate increase of \$1.50 - \$5.00 per AUM from 1988 to 1992.

Gross cash rent-to-value ratios (before deduction of property taxes and other landlord expenses) averaged 7.6% for all agricultural land, slightly above 8% for nonirrigated cropland and hayland, and 7% for rangeland. Gross cash rent-to-value ratios varied across different regions from 7.6% - 9.0% for nonirrigated cropland to 6.3% - 8.0% for rangeland. From 1991 to 1992, there were minimal changes in the ratio of gross cash rent to reported land value by region or land use.

Respondents were also asked to estimate net rates of return to agricultural land ownership, given current real estate values. The statewide average estimated net rate of return on all-agricultural land declined from 6.6% in 1991 to 5.8% in 1992. Net rates of return declined for cropland, hayland, and rangeland and declined in all eight regions of South Dakota. Substantial increases in real estate taxes is one of the major reasons that net return to land ownership declined. In most regions, average current net rates of return to each agricultural land use were between 5.1% - 6.8%.

According to respondents, the major reason for buyers purchasing farm real estate are for farm expansion (49%) and/or for investment purposes (15%). Profitable livestock operations and lower interest rates were also major reasons for agricultural land purchases.

The major reasons that landowners are selling farm real estate are due to retirement, estate settlement, financial pressure and good market conditions for selling farm real estate. There were no major regional differences in reasons listed for selling farmland.

Good livestock and grain prices, lower interest rates, competitive bidding/farm size expansion pressures, and buyer perception that farmland is a good investment were the four major reasons that most respondents reported higher land values in 1992.

Most respondents projected stable to modest increases in agricultural land values in 1992. Overall, respondents' projections of farmland value changes are lower than most forecasts of 1992 inflation rates, indicating some decline in inflation-adjusted farmland values is likely. This represents a major change from the strong increases in South Dakota farmland values from 1987 - 1991.

INTRODUCTION

Agricultural land values and cash rental rates in South Dakota by agricultural land use, regional and statewide, are the primary topics of this report. The 1992 estimates of agricultural land values and cash rental rates are based on reports from 258 respondents to the SDSU 1992 South Dakota Farm Real Estate Market Survey. Respondents are agricultural lenders, rural appraisers, realtors, professional farm managers, and Extension agricultural agents who are knowledgeable of agricultural land market trends in their locality.

The 1992 SDSU Farm Real Estate Market Survey is the second annual survey developed to estimate agricultural land values and cash rental rates by type of land in different regions of this diverse state. We believe this is the only published reference source that provides information on both agricultural land values and cash rental rates by land use and substate region in South Dakota. Land value and cash rental rate information is provided for nonirrigated (dryland) cropland, rangeland/pastureland, hayland and irrigated land. This report does not provide any information on values or rental rates for farm buildings or farm dwellings.

This publication is developed in response to requests by many farmland owners, renters, lenders, appraisers, and others for more detailed information on agricultural land values and cash rental rates in South Dakota. This report has a similar format as last years report and is similar to annual farmland market reports for Nebraska and North Dakota (B. Johnson, 1991; J. Johnson, 1991).

Surveys were mailed to potential respondents in February and March, 1992 requesting information on 1992 cash rental rates and agricultural land values as of February 1, 1992. A copy of the survey and further discussion of response rates, respondent characteristics, and estimation procedures are available in the appendix of this report.

The eight agricultural regions used in this report are shown in Figure 1. The six regions in eastern and central South Dakota correspond with USDA Crop Reporting Districts. In western South Dakota, farmland values and cash rental rates are reported for northwest and southwest South Dakota.

The information in this report provides an overview of general agricultural land values and cash rental rates across South Dakota. It may or may not reflect actual land values and cash rental rates unique to specific localities or specific properties. We caution the reader to use this information as a general reference, while relying on local sources for more specific details.

SOUTH DAKOTA FARM REAL ESTATE VALUE TRENDS, 1970 - 1992

South Dakota farm real estate values behaved like a rollercoaster from 1970 - 1992. According to U.S. Department of Agriculture (USDA) data, South Dakota farm real estate values rapidly increased from 1972 - 1982, remained nearly stable until early 1984, sharply declined from early 1984 to early 1987, and increased 53% from early 1987 to early 1992 (Figure 2). Current dollar value of South Dakota's farmland, in early 1992, exceed the previous peak values reported in the 1982 - 1984 period (USDA, 1992).

Adjusting farm real estate values for changes in purchasing power indicated rapid increases in real (inflation-adjusted) farm real estate values from 1972 - 1979, relatively stable farm real estate values from early 1979 to early 1984, sharply declining values from early 1984 to early 1987, and a 27% increase in real farm real estate values from early 1987 through early 1992 (Figure 2). Adjusted for inflation, South Dakota farm real estate values in early 1992 are comparable to farm real estate values in 1976 and are 71% of peak real values in 1981 -1982.

From 1987 - early 1992, farm real estate values have increased more rapidly in South Dakota, Minnesota, Iowa, and New Mexico (49% - 53%) than in all other states (Figure 3). Almost all states in the Corn Belt, Lake States and Northern Plains regions ¹reported farm real estate value increases exceeding the U.S. average of +14% during the past five years. The USDA also reported agricultural land values increases exceeding 14% from 1987 - early 1992 in Idaho, Montana, Florida, South Carolina, Virginia, Pennsylvania, New Jersey and Delaware (USDA, 1992) In general, farm real estate value increases have been strongest in the corn-soybean-hog and spring wheat-cattle states and in a few highly urbanized states.

Farm real estate value changes from 1987 to 1992 have been minimal or negative (+5% to -15%) in many southern and western states, with the greatest percentage decline reported in Texas. Farm real estate values in most of these states did not decline as much in the 1982 - 1987 period as occurred in the Corn Belt, Lake States and Northern Plains regions.

In real (inflation-adjusted) terms, U.S. farm real estate values declined (-5%) from 1987 - 1992. Furthermore, real values of farm real estate have declined in at least 35 states during this period. The major regions of real (inflation-adjusted) increases in farm real estate values are in the agricultural export and farm commodity program dependent states. The greatest increases in inflation adjusted farm real estate values (+23% - +27%) occurred in South Dakota, Iowa and Minnesota (USDA, 1992 and Figure 3).

¹ States included in each region are:

Northern Plains	- North Dakota, South Dakota, Nebraska, Kansas;
Lake States	- Minnesota, Wisconsin, Michigan; and
Corn Belt	- Iowa, Missouri, Illinois, Indiana, Ohio.

Figure 1. Agricultural Regions of South Dakota.

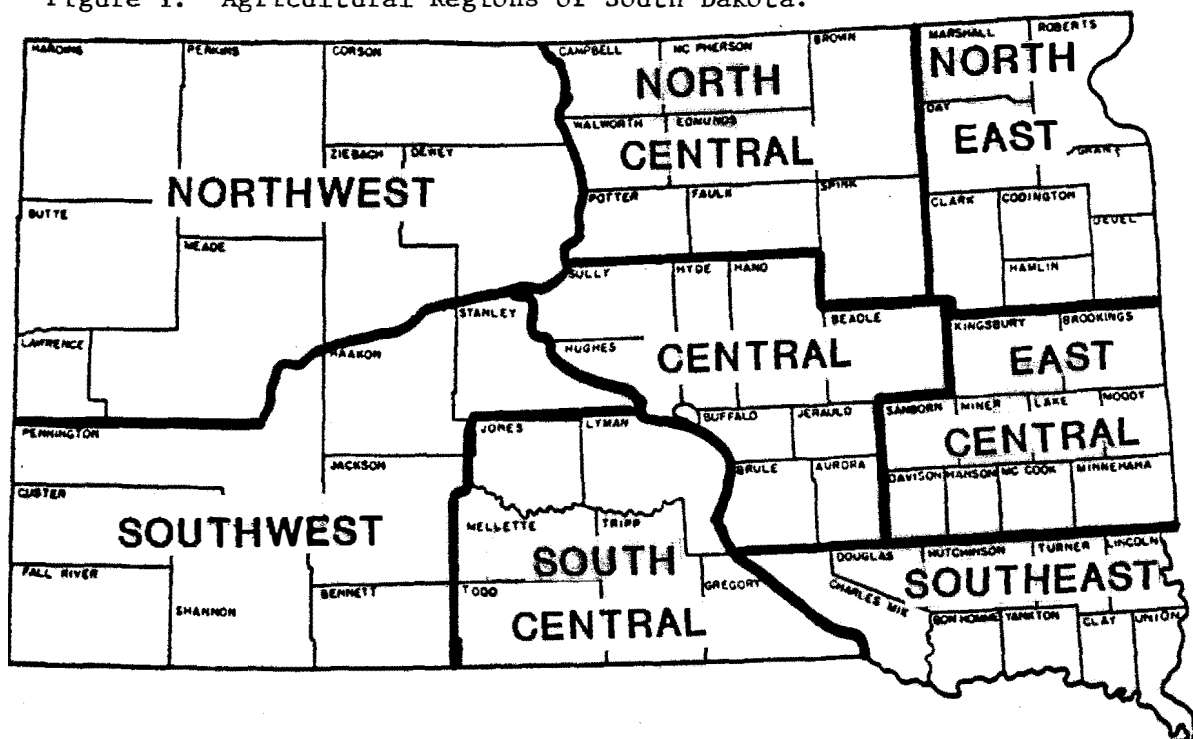
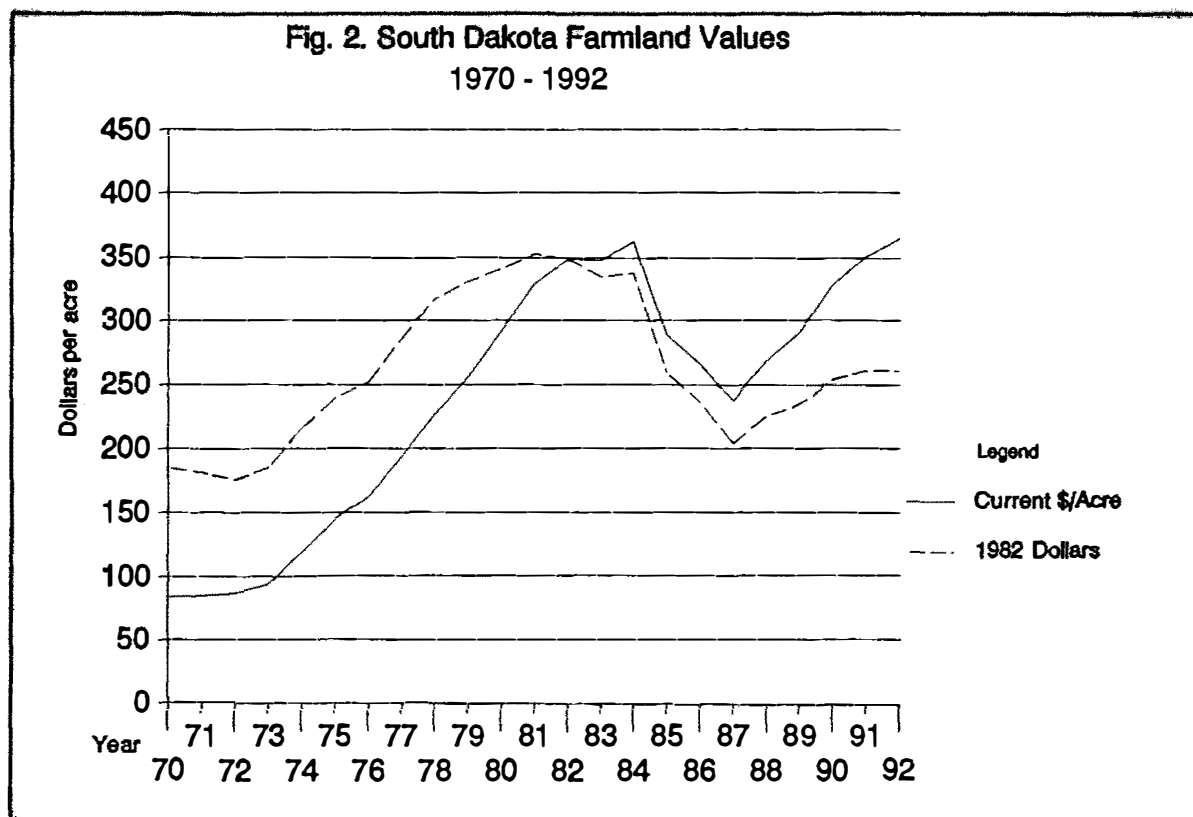
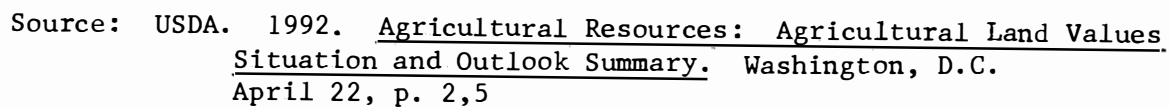
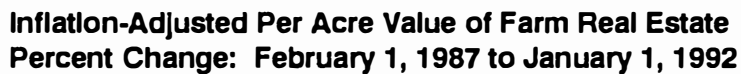


Fig. 2. South Dakota Farmland Values
1970 - 1992



**Percent Change In Farm Real Estate Value Per Acre (Nominal Dollars):
February 1, 1987 to January 1, 1992**



Farmland values, in farm dependent states such as South Dakota, are a "barometer" of current and expected returns in agriculture. The rollercoaster behavior of South Dakota farmland values and per acre sale prices are directly related to rapidly changing economic conditions in the agricultural sector. The agricultural export and finance boom occurred from 1972 into the early 1980's and farmland values were rapidly increasing. During the depths of the farm finance crisis (1984 - 1987) farmland values were sharply declining. Farmland values have been increasing in the 1988 - 1992 period because of favorable livestock prices, improved crop prices and considerable Federal support of farm incomes.

1992 SOUTH DAKOTA AGRICULTURAL LAND VALUES AND VALUE CHANGES

Respondents to the 1992 South Dakota Farm Real Estate Market Survey were asked to estimate the per acre value of cropland, hayland, rangeland, tame pastureland, and irrigated land in their locality (county) and the percent change in value from one year earlier. Responses were grouped by regional location (Figure 1). The average value per acre and percent change in value were obtained for each type of agricultural land in each region. Regional and statewide all-land value estimates are weighted averages based on the relative amount of each type of agricultural land in each region of South Dakota.

As of February 1992, the South Dakota all-land average value was \$245 per acre, an estimated 3.4% increase in value from one year earlier (Figure 4 and Table 1). Respondents' estimate of percentage change in land value (3.4%) is very close to the estimate of +4% in the 1992 USDA report, although the average per acre value in the SDSU survey is considerably lower.^{2,3}

² The estimated per acre value of South Dakota's agricultural land (\$245) obtained from the SDSU survey is considerably lower than the USDA reported value (\$365 per acre). One major reason for this difference is the USDA farm real estate value series includes the estimated value of all agricultural land and farm buildings. According to published USDA statistics, farm building values contributed 15% - 16% (\$51 - \$53 per acre) of the total value of agricultural land in South Dakota in the 1989 - 1991 period (USDA, 1991). The other major reasons for different per acre values are: (1) USDA reporters were asked to estimate the value of agricultural land in their locality, while (2) SDSU survey respondents were asked to estimate the value of different types of agricultural land (cropland, hayland, rangeland etc.), but were not asked to estimate the value of "all agricultural land" in their locality.

³ Findings from an SDSU study of 15,142 South Dakota farmland tracts sold from 1971 - 1987 indicated similar time trends in actual per acre farmland sale prices (including value of farm building sites) and in USDA reported farm real estate values. In more recent years (1983 - 1987) average South Dakota farmland sale prices per acre were considerably lower than USDA reported farm real estate values. This discrepancy occurred when USDA revised their farm real estate value series upward, for the 1983 - 1988 period, to reflect benchmark data from the 1987 Census of Agriculture.

Regional differences in all-agricultural land values are directly related to: (1) major differences in agricultural land productivity among regions, (2) major differences in per acre values of cropland and rangeland in each region, and (3) major differences by region in the proportion of cropland vs. rangeland.⁴

The all-land average value is highest in the southeast region (\$533 per acre), east central region (\$475 per acre), and northeast region (\$371 per acre). These three eastern regions contain the most productive land in South Dakota. Cropland and hayland are the dominant agricultural land uses (70% - 74% of farmland acres) in each of these regions.

Agricultural land values in the three regions of central South Dakota are much lower than in eastern South Dakota. The average value of agricultural land varies from \$189 per acre in the south central region to \$225 per acre in the central region and \$263 per acre in the north central region. Cropland and hayland are a majority of farmland acres in the central and north central regions, while pasture and rangeland are 62% of agricultural land acres in the south central region.

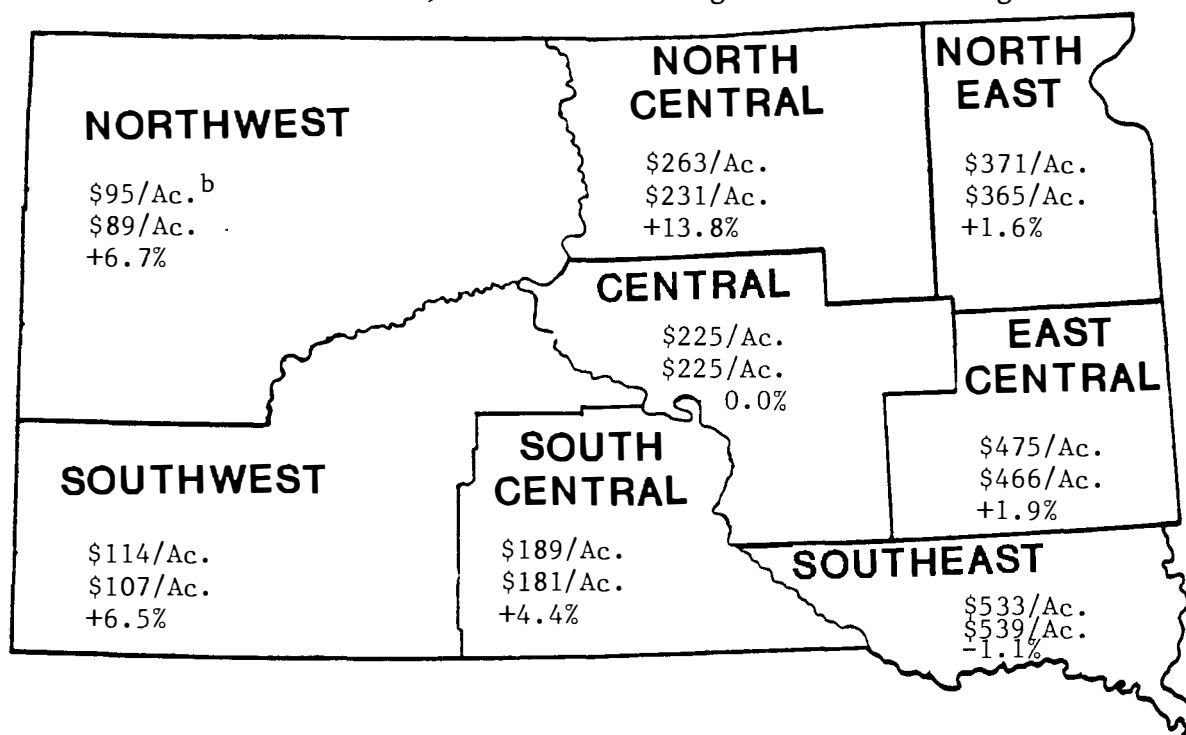
The lowest average agricultural land values are found in the northwest (\$95 per acre) and southwest regions (\$114 per acre). More than 70% of farmland acres in these western regions are in native rangeland and pasture.

According to survey reports, there were substantial regional differences in average percentage changes in agricultural land values from 1991 to 1992. The greatest increases in agricultural land values (+13.8%) occurred in the north central region, followed by increases of 6.5% - 6.7% in western South Dakota. Overall, the largest percentage increases occurred in the major wheat-cattle regions of South Dakota. Several respondents in these regions commented that strong wheat and cattle prices and recovery from drought conditions in some areas were leading to upward pressure on land prices.

Agricultural land value changes were minimal in the three eastern regions and in the central region of South Dakota (-1.1% to +1.9%). The southeastern region is the only South Dakota region where nominal land values declined. Several respondents in the southeast region indicated that drought conditions, poor crop prices (especially for corn and hay), and reduced government payments led to steady or slightly declining land prices.

⁴ Most agricultural land in each region (78% - 85%) is either native rangeland or nonirrigated cropland, but the proportion in each use varies greatly by region. Most of the remaining agricultural land in each region is tame (improved) pasture or hay (alfalfa, other tame or native hay). Irrigated land is less than 1% of South Dakota's agricultural land acreage and is primarily used to produce corn or alfalfa hay. Irrigated land is concentrated in the southeast region, near the Black Hills, or along the Missouri River.

Figure 4. Average Value of South Dakota Agricultural Land, February 1, 1992 and 1991, and Percent Change From One Year Ago.^a



State: \$245/Ac.
\$237/Ac.
+3.4%

^aRegional and statewide average value of agricultural land are the weighted averages of dollar value per acre and percent change by proportion of acres of each land use by region.

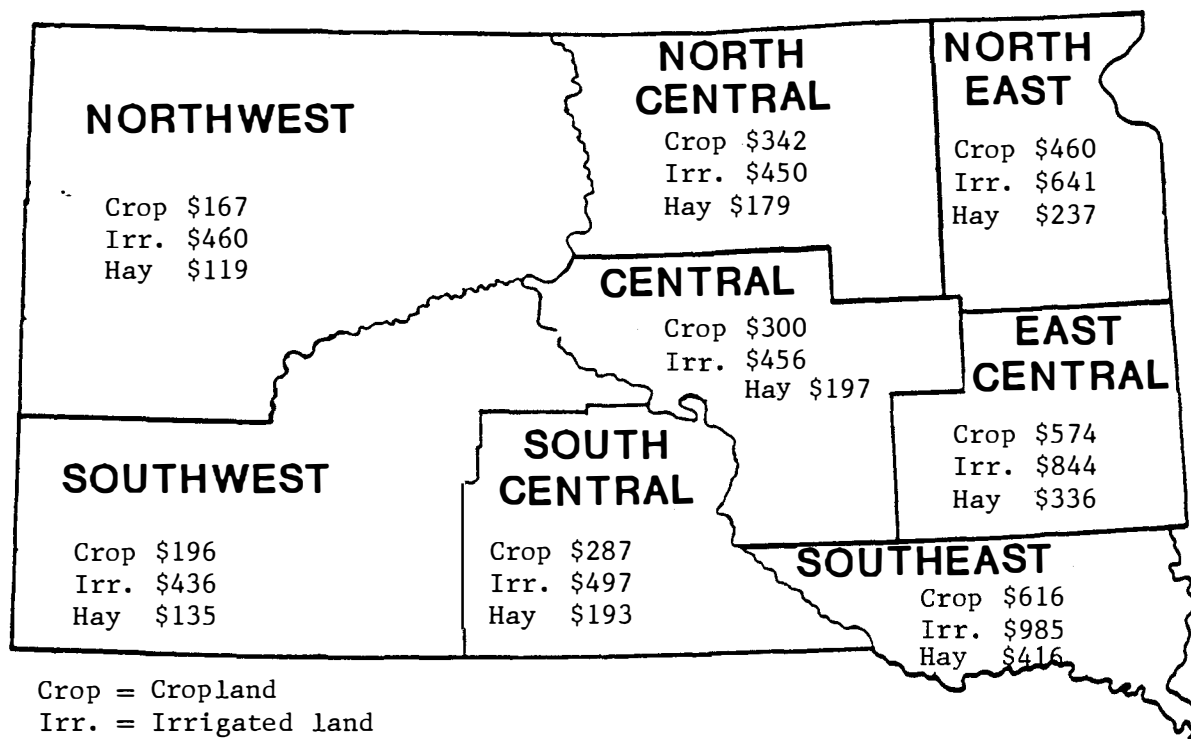
^bTop: Average per acre value - February 1, 1992

Middle: Average per acre value - February 1, 1991

Bottom: Annual percent change in per acre land value

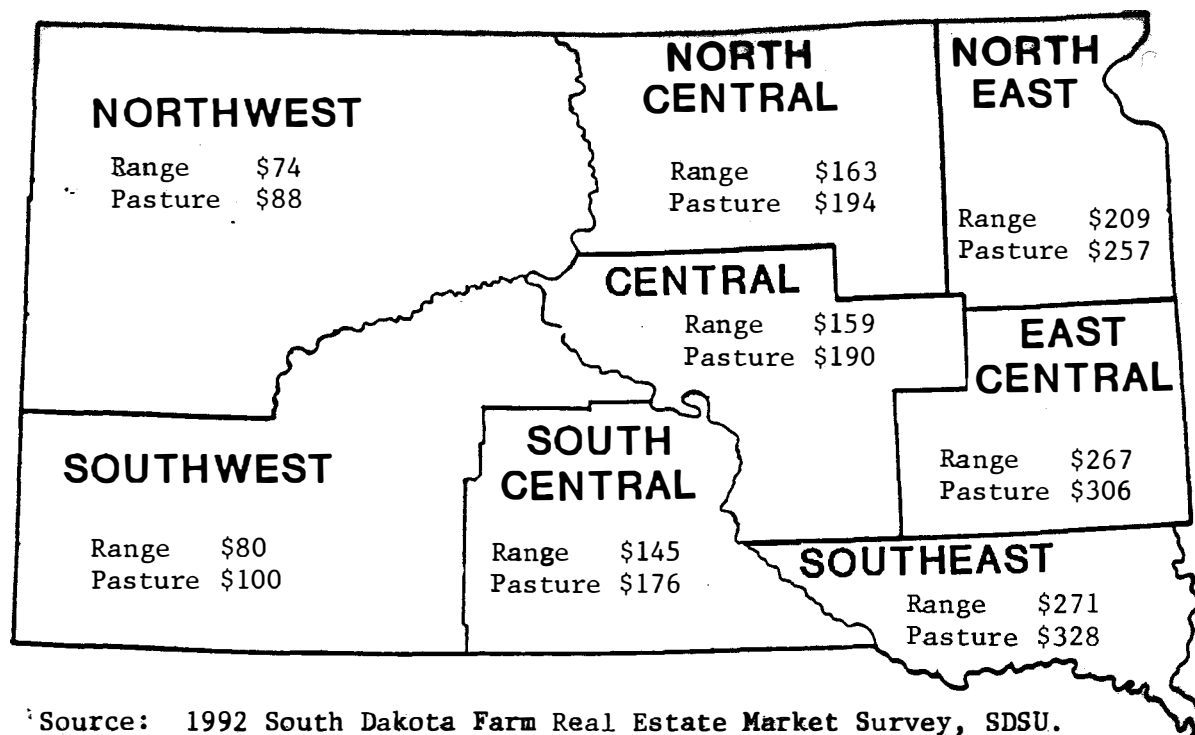
Source: 1992 South Dakota Farm Real Estate Market Survey, SDSU.

Figure 5. Average Value of South Dakota Dryland Cropland, Irrigated Land and Hayland, by Region, February, 1992, Dollars per Acre.



Source: 1992 South Dakota Farm Real Estate Market Survey, SDSU.

Figure 6. Average Value of South Dakota Rangeland and Tame Pasture, by Region, February, 1992, Dollars per Acre.



LAND VALUES AND VALUE CHANGES BY TYPE OF LAND AND REGION

Major differences in value changes by type of land across regions occurred. In each region, per acre values are highest for irrigated land, followed by dryland (nonirrigated) cropland, hayland or tame pasture, and native rangeland. For each land use, per acre land values are highest in the southeast region, followed by land values in the east central and northeast region. The lowest average land values are found in the northwest and southwest regions (Figures 5 and 6, Table 1).

Dryland (nonirrigated) Cropland and Hayland Values

The weighted average value of South Dakota's nonirrigated cropland (as of February, 1992) is \$398 while the average value of hayland is \$207 per acre. The statewide average percent change in value is 4.2% for cropland and -2.0% for hayland. There was considerable regional variation in value changes. For example, the lowest average percentage change in cropland values (-1.1%) and hayland values (-9.4%) was in the southeast region in part due to drought conditions. On the other hand, cropland values increased by 16.3% in the north central region of South Dakota while hayland values increased by 5.9% in the north central region and by 7.1% in the southwest region (Table 1).

Nonirrigated cropland values declined in one region (southeast), were unchanged in the central region and increased less than 4% in the east central and northeast regions. Hayland values declined in the northwest, south central and all regions of eastern South Dakota. Substantial declines in hay prices in 1991, compared to 1990, was a contributing factor.

The southeast region has the highest average cropland values (\$616 per acre) and the highest hayland values (\$416 per acre). Average cropland and hayland values in the east central and northeast regions are lower than average values in the southeast region, but considerably above statewide average values (Table 1 and Figure 5). Major farmland uses are corn, soybeans, small grains and alfalfa hay.

In the central regions of South Dakota, average cropland values vary from \$287 per acre in the south central region to \$342 per acre in the north central region. Average hayland values are relatively close to each other, ranging from \$179 per acre in the north central region to \$197 per acre in the central region. Wheat and small grains are the predominant cropland uses in these regions, while hayland consists of alfalfa hay, other tame hay, and native hay.

The lowest average cropland values (\$167 to \$196 per acre) and hayland values (\$119 to \$135 per acre) are found in the northwest and southwest regions. The dominant cropland uses are spring wheat in the northwest region, and winter wheat in southwest South Dakota.

Average per acre cropland values and hayland values in the northwest region are about one-fourth of average cropland and hayland values in the southeast region of South Dakota.

Native Rangeland and Tame (improved) Pastureland Values

In February, 1992 the weighted average value of South Dakota native rangeland was \$119 per acre, while the average value of tame pasture was \$210 per acre. Native rangeland is concentrated in the western and central regions of South Dakota, while tame pasture is concentrated in the eastern and central regions.

The statewide average change in value was +4.4% for rangeland and +2.0% for tame pastureland. The greatest relative increases in rangeland values (+7.2% - +10.7%) occurred in the north central and western regions of South Dakota, while tame pastureland values increased substantially in the north central, south central and southwest regions. Rangeland and tame pastureland values declined slightly in the east central and central regions. Some reduction in profitability of cow-calf operations has reduced the growth rate in grazing land values.

Rangeland average values are highest in the southeast and east central regions (\$271 and \$268 per acre, respectively) and lowest in the northwest and southwest regions (\$74 and \$80 per acre, respectively). In the central regions of South Dakota, average rangeland values vary from \$145 to \$163 per acre, compared to \$209 per acre in the northeast region (Table 1 and Figure 6). In each region, the average value of tame pastureland exceeds rangeland values by 15% - 25%.

Within most regions, nonirrigated cropland average value per acre is 1.9 - 2.3 times the average value of native rangeland. In all regions, per acre average hayland and tame pasture values are considerably lower than nonirrigated cropland values and somewhat higher than native rangeland values.

The reported regional differences in average values per acre in 1992 and in 1991 are consistent with regional and agricultural land use price relationships obtained from previous studies of farmland sales tracts (Janssen, 1988a and 1988b, Janssen and Pflueger, 1991).

Irrigated Land Values

Statewide average irrigated land values are \$615 per acre, a 7.1% increase from one year earlier. Average irrigated land values are highest in the southeast region (\$985 per acre) and east central region (\$844 per acre) and close to the statewide average in the northeast region. Estimated irrigated land average values varied from \$433 to \$480 per acre in the western and central regions of the State (Table 1 and Figure 5).

The percentage changes in irrigated land values showed more regional fluctuation than for any other land use. Because irrigated land is not common (less than 1% of agricultural land acreage in most regions) and there are few sales of irrigated land tracts, considerably fewer respondents (only 29% of all respondents) were familiar with and were able to provide information on irrigated land values. Furthermore, there are no published data on South Dakota irrigated land values or irrigated land sale prices. Consequently, we are unable to use previous studies to assess the reliability of reported irrigated land values. We

Table 1. Average Reported Value of South Dakota Agricultural Land by Type of Land by Region, February 1992, and 1991, and Percent Change from 1991.

Type of Land	Region								STATE ^a
	South east	East Central	North east	North Central	Central	South Central	South west	North west	
<u>Dryland cropland</u>									
Average value, 1992	616	574	460	342	300	287	196	167	398
Average value, 1991	623	554	450	294	300	272	185	153	382
Annual % change	-1.1	+3.6	+2.2	+16.3	0.0	+5.3	+5.9	+9.5	+4.2
<u>Rangeland (native)</u>									
Average value, 1992	271	267	209	163	159	145	80	74	119
Average value, 1991	268	271	205	147	163	137	74	69	114
Annual % change	+1.1	-1.4	+1.9	+10.7	-2.2	+5.6	+8.0	+7.2	+4.4
<u>Pasture (tame, improved)</u>									
Average value, 1992	328	306	257	194	190	176	100	88	210
Average value, 1991	315	325	252	170	199	163	92	94	206
Annual % change	+4.1	-5.9	+2.0	+14.1	-4.5	+8.0	+8.6	-4.0	+2.0
<u>Hayland</u>									
Average value, 1992	416	36	237	179	197	193	135	119	207
Average value, 1991	461	358	252	169	190	197	126	122	211
Annual % change	-9.7	-9.4	-6.0	+5.9	+3.9	-2.0	+7.1	-2.2	-2.0
<u>Irrigated land</u>									
Average value, 1992	985	844	641	450	456	497	436	460	615
Average value, 1991	942	665	563	433	454	472	480	383	574
Annual % change	+4.6	+27.0	+13.8	+3.9	+0.4	+5.3	-9.0	+20.0	+7.1
<u>All Agricultural land^a</u>									
Average value, 1992	533	475	371	263	225	189	114	95	245
Average value, 1991	539	466	365	231	225	181	107	89	237
Annual % change	-1.1	+1.9	+1.6	+13.1	+0.0	-4.4	+6.5	+6.7	+3.4

Source: 1992 South Dakota Farm Real Estate Market Survey.

^aWeighted averages of dollar value per acre and percent change by proportion of acres of each land use by region.

caution the reader that data (especially percentage changes) on irrigated land values is not as reliable as land value data on other agricultural land uses.

REGIONAL LAND VALUES BY AGRICULTURAL LAND USE AND LAND PRODUCTIVITY

To this point, this publication has provided a statewide and regional summary of respondents' estimated value of average quality land in each agricultural land use. Respondents also estimated, for each land use, the average value of high productivity land and the average value of low productivity land in their locality. This approach provides information on the distribution of land values by agricultural land use in each region due to variation in land quality (productivity).

The average reported value of agricultural land by use and productivity is summarized by region in Table 2. For example, in the southeast region, the average value of low productivity cropland is \$449 per acre while high productivity cropland values average \$794 per acre. In the northwest region, cropland values vary from an average of \$122 per acre for lower productivity cropland to \$210 per acre for higher productivity cropland.

The average value of rangeland by productivity level (average, high, and low) are similar in the southeast and east central region. In these two eastern regions, low productivity rangeland has an average value of \$203 - \$206 per acre, while high productivity rangeland has an average value of \$309 - \$312 per acre. In the northwest region, the average value of low productivity rangeland is only \$48 per acre and the average value of high productivity rangeland is \$97 per acre. The regional differences in per acre rangeland values reflects the differences in livestock carrying capacity.

Key findings from examination of data reported in Table 2 are:

- (1) Substantial variation in land values exist for each land use within each region. For nonirrigated cropland, the average value of higher productivity land was 60% - 90% above the average value of lower productivity cropland in the same region. For rangeland, the average value of high productivity rangeland was 50% - 66% above the average value of low productivity rangeland in all regions east of the Missouri River and nearly twice the value of low productivity rangeland in regions west of the Missouri River.
- (2) The central region has the least relative variation in per acre land values due to differences in land productivity. The greatest relative variation in land values occurred for cropland in regions of eastern South Dakota and for native rangeland in regions west of the Missouri River.
- (3) The average value of high productivity land for most land uses is 12% - 30% higher than the reported value of average quality land in each region.

- (4) The average value of lower productivity land in most cases is 20% - 30% lower than the reported value of average quality land in each region. However, the average reported value of lower productivity rangeland located west of the Missouri River is 33% - 39% lower than reported for average quality rangeland.

AGRICULTURAL LAND VALUES BY REGION AND COUNTY CLUSTERS

Overall, considerable variation in land values by agricultural land use occurs within each region. This section reports per acre values of average quality, high productivity and low productivity land by agricultural land use by region and county clusters within several regions (Table 2A). A county cluster is a group of counties within the same region that have similar agricultural land use and land value characteristics.

Three county clusters were developed in each of the following regions: southeast, east central, northeast, north central and central. The south central, southwest, and northwest regions were not divided into county clusters.

The greatest variation in agricultural land values occurs among county clusters in the southeast and east central regions. For example, the value of average quality nonirrigated cropland is \$811 per acre in the Clay-Lincoln-Turner-Union county cluster but is only \$366 per acre in the Charles Mix-Douglas county cluster. In the east central region, the value of average quality cropland is \$829 per acre in the Minnehaha-Moody county cluster compared to \$545 per acre in the Brookings-Lake-McCook county cluster, and \$402 per acre in the other counties of the east central region. The average land value differences for rangeland, pastureland and hayland between county clusters in these two regions are substantial, but are not as great as the differences in average cropland values (Table 2A).

Within the northeast and north central regions, average per acre land values are fairly similar within three broad groups of counties: (1) Codington-Deuel-Hamlin and Grant-Roberts county clusters; (2) Clark-Day-Marshall and Brown-Spink county clusters; and (3) Edmund-Faulk-McPherson and Campbell-Potter-Walworth county clusters. Average per acre value of rangeland is similar in the Brown-Spink county cluster and across all county clusters of the northeast region. Similar results occur for pastureland and hayland. However, per acre cropland values are substantially different across the three broad groups of counties.

In the central region, per acre value of rangeland, pastureland, and hayland is highest in the Aurora-Beadle-Jerauld county clusters. Cropland values are slightly higher in the Hughes-Sully county cluster.

Agricultural land values are not reported by county clusters in the northwest, southwest, and south central regions. The primary reasons are: (1) too few reports from any specific county groupings, or (2) average land values were not greatly different across county groupings. At present, this survey is

Table 2. Average Reported value of South Dakota Agricultural Land by Type of Land and Land Productivity, by Region, February, 1992

Agricultural Land Type and Productivity	South-east	East Central	North-east	North Central	Central	South Central	South-west	North-west
	-----dollars per acre-----							
Dryland cropland								
Average	616	574	460	342	300	287	196	168
High Productivity	794	723	628	438	366	373	244	210
Low Productivity	449	399	329	247	229	209	139	122
Rangeland (Native)								
Average	272	267	209	163	159	145	80	74
High Productivity	309	312	251	193	187	188	105	97
Low Productivity	206	203	155	116	117	97	51	48
Pastureland (tame, improved)								
Average	328	306	257	194	190	176	100	88
High Productivity	368	356	303	231	228	227	132	112
Low Productivity	264	238	196	151	150	114	75	66
Hayland								
Average	416	336	237	179	198	193	135	119
High Productivity	467	390	278	213	225	252	163	149
Low Productivity	280	241	167	138	152	146	94	85
Irrigated Land								
Average	985	844	641	450	456	497	436	460
High Productivity	1211	1022	753	586	491	570	544	654
Low Productivity	861	678	515	404	375	370	331	313

Source: 1992 South Dakota Farm Real Estate Market Survey, SDSU.

Table 2A. Average Reported Value Per Acre of Agricultural Land by South Dakota Region
and County Clusters by Type of Land and Land Productivity, February, 1992.

Agricultural Land Type and Productivity	Southeast				East Central			
	All	Clay Lincoln Turner Union	Bon Homme Hutchinson Yankton	Charles Mix Douglas	All	Minnehaha Moody	Brookings Lake McCook	Sanborn Davison Hanson Kingsbury Miner
-----dollars per acre-----								
Dryland cropland								
Average	616	811	661	366	574	829	545	402
High Productivity	794	1067	847	452	723	1029	701	484
Low Productivity	449	592	441	276	399	542	377	319
Rangeland (Native)								
Average	272	303	277	225	267	318	252	249
High Productivity	309	358	324	249	312	371	303	294
Low Productivity	206	238	212	165	203	196	202	204
Pastureland (tame, improved)								
Average	328	407	345	243	306	414	273	284
High Productivity	368	465	396	272	356	450	333	344
Low Productivity	264	322	279	183	238	293	216	235
Hayland								
Average	416	556	467	243	336	446	300	270
High Productivity	467	602	517	274	390	498	357	317
Low Productivity	280	367	297	181	241	290	225	210
Irrigated Land								
Average	985	1174	1162	655	844	**	838	**
High Productivity	1211	1407	1524	740	1022	**	969	**
Low Productivity	861	1056	1102	465	678	**	669	**

** Insufficient number of reports

Source: 1992 South Dakota Farm Real Estate Survey, SDSU

Table 2A-Continued

Agricultural Land Type and Productivity	Northeast				North Central			
		Codington		Clark			Edmund	Campbell
	All	Deuel Hamlin	Grant Roberts	Day Marshall	All	Brown Spink	Faulk McPherson	Potter Walworth
-----dollars per acre-----								
Dryland cropland								
Average	460	494	496	398	342	409	236	310
High Productivity	628	645	738	523	438	557	269	366
Low Productivity	329	370	319	290	247	274	188	228
Rangeland (Native)								
Average	208	229	206	204	162	202	137	134
High Productivity	251	282	247	246	193	246	157	165
Low Productivity	154	173	148	147	115	137	106	87
Pastureland (tame, improved)								
Average	257	292	231	240	193	235	152	173
High Productivity	303	342	293	281	231	294	173	200
Low Productivity	196	214	180	204	151	187	117	114
Hayland								
Average	236	228	244	227	179	200	153	193
High Productivity	278	278	285	278	213	251	171	216
Low Productivity	167	163	176	157	138	160	119	128
Irrigated Land								
Average	641	690	634	640	450	**	**	**
High Productivity	753	817	775	722	585	**	**	**
Low Productivity	515	547	500	531	404	**	**	**

Table 2A-Continued

Agricultural Land Type and Productivity	Central				South Central	South- west	North- west
	All	Aurora Beadle Jerauld	Buffalo Brule Hand Hyde	Hughes Sully	All	All	All
-----dollars per acre-----							
Dryland cropland							
Average	300	314	279	327	286	196	167
High Productivity	366	374	355	400	372	244	210
Low Productivity	229	247	205	246	208	139	122
Rangeland (Native)							
Average	159	198	154	101	144	80	73
High Productivity	186	220	181	128	188	104	96
Low Productivity	117	158	113	74	96	50	47
Pastureland (tame, improved)							
Average	189	204	181	121	175	100	88
High Productivity	227	234	224	146	227	131	111
Low Productivity	150	163	142	103	113	75	66
Hayland							
Average	197	217	197	147	193	135	119
High Productivity	225	238	225	176	251	162	148
Low Productivity	151	173	155	107	146	93	85
Irrigated Land							
Average	456	429	**	**	497	435	460
High Productivity	490	466	**	**	570	543	653
Low Productivity	375	350	**	**	370	331	312

not designed to reflect the substantially different nonirrigated agricultural land values adjacent to and in the Black Hills region, compared to the plains areas of western South Dakota. Most of the irrigated land value reports from western South Dakota are from counties with irrigated lands close to the Black Hills.

The overall examination of average land values by county clusters more clearly reveals the combined impacts of climatic factors (precipitation, growing degree days), soil associations, and land use on relative values of agricultural land across South Dakota. Federal agricultural programs also have a significant direct impact on cropland values via commodity program benefits. The Conservation Reserve program also has some impact on agricultural land values as it affects the availability of land used for agricultural production.

MAJOR REASONS FOR CHANGING FARMLAND MARKET CONDITIONS

Respondents to the 1992 survey were asked to provide reasons for their reported changes in land values as well as the motivating factors influencing the decisions of buyers and sellers. No potential choices were provided in the survey and respondents were able to list two major reasons to each question.

Respondents provided a wide variety of reasons why agricultural land values had either increased or decreased in 1991. Good prices for livestock and crops (especially higher wheat prices) were most often cited (32% of responses to this question) as the primary reason for increases in land values. Lower interest rates was the second major factor (22% of responses) leading to increased or stable land values. Two other major reasons cited for increasing agricultural land values in 1991 were: (1) competitive bidding and farm size expansion pressures, and (2) farmland is a good long-term investment. Higher wheat prices and reasonably favorable livestock prices were generally credited as the major factors increasing agricultural land values in north central and in western South Dakota. The Conservation Reserve Program was also cited as a factor increasing cropland values and rental rates.

Almost one-fourth of the reasons listed for land value changes, emphasized negative (bearish) factors including: poor commodity prices, drought, reduced commodity program payments, substantially higher real estate taxes, and uncertainty over the future direction of the economy. Several respondents in the southeast and central regions discussed the impact of drought on agricultural land values in their county.

Beyond the reasons for changes in farmland values, respondents were asked to provide major reasons why buyers were purchasing farmland. Almost all of the 258 respondents provided one major reason for changing land values and nearly half provided two major reasons. Of the 368 responses to this question, 49.5% indicated that farm expansion was the major reason that buyers were purchasing farmland (Figure 7). Farm expansion pressure were cited more often by respondents from the northeast and north central regions.

Investment potential was the second most popular reason (15.2%) for purchasing farmland and was listed more often by respondents in the southeast and east central regions. Additional major reasons for purchasing farmland include tract location, profitable livestock and wheat prices, and lower interest rates. Profitable livestock prices were most often cited by respondents from western South Dakota.

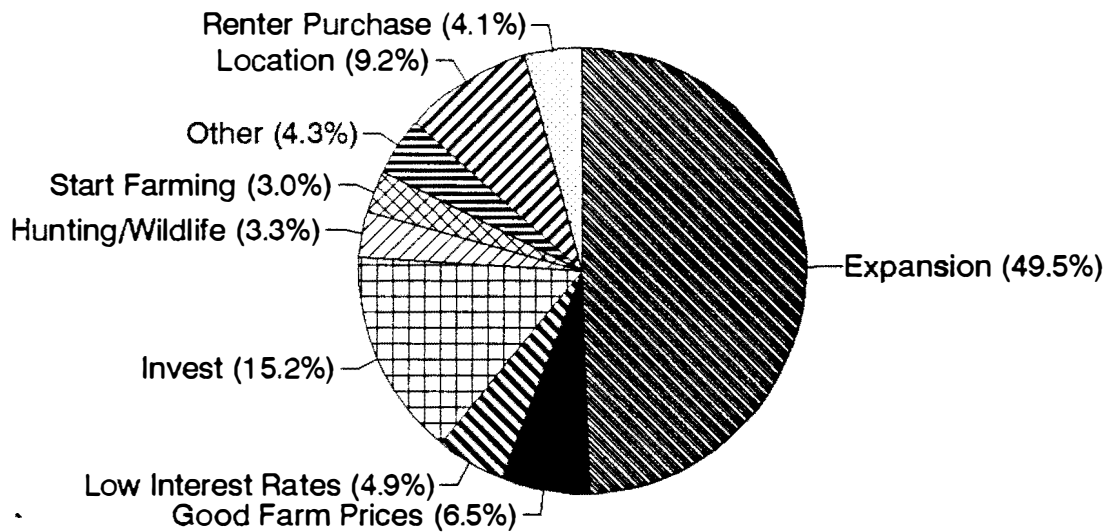
There were many other reasons, given for buyers purchasing South Dakota agricultural land in 1991. Some reasons in the "other" category were: (1) producers purchasing land previously leased from their landlord, or (2) purchasing land for use as a hunting reserve, or (3) purchasing land to start a career in farming/ranching.

Retirement from farming was most often cited (43% of 394 responses to this question) as the primary reason that landowners were selling farmland (Figure 8). A much smaller proportion of responses (4.6%) indicated farmland was sold because the landowner was exiting from production agriculture for different reasons. Combined, these two categories constitute 47.6% of all responses.

Additional major reasons for selling farmland include: financial pressures or low profit, estate settlement, and favorable market conditions for selling agricultural land. There were no major regional differences in the proportion of respondents citing various reasons for selling farmland.

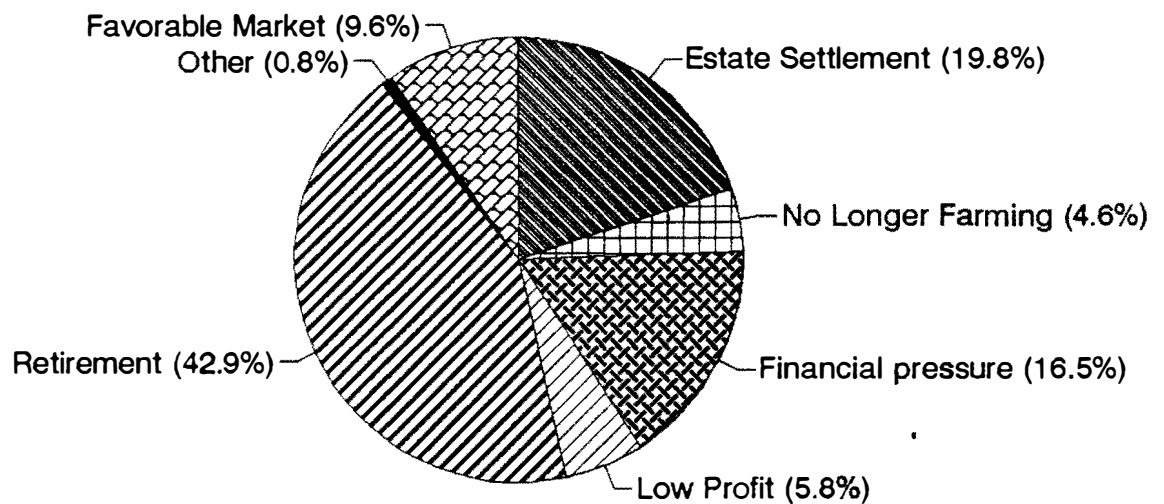
Overall, farm expansion is the major reason for purchasing farmland while farm retirement or estate settlement are the major reasons for selling farmland. These motives are consistent with the major reasons for agricultural land market transactions since the mid-1950's. Financial position remains an important, though secondary, motivation factor for many buyers and sellers in the South Dakota farmland market. Finally, there are many other motivations for purchasing and selling farmland and the relative importance of various reasons may change over time.

Figure 7. Reasons For Buying Farmland



Source: 1992 Farm Real Estate Market Survey, SDSU

Figure 8. Reasons for Selling Farmland



Source: 1992 Farm Real Estate Market Survey, SDSU

1992 CASH RENTAL RATES OF SOUTH DAKOTA'S AGRICULTURAL LAND

The cash rental market provides important information on returns to agricultural land. Nearly three-fourths of South Dakota's farmland renters and three-fifths of agricultural landlords are involved in one or more cash leases for cropland, hayland or pasture/rangeland. A majority of cash leases are annual renewable agreements (Peterson and Janssen, 1988).

Respondents to the 1992 SDSU Farm Real Estate Market Survey were asked about average cash rental rates per acre for nonirrigated cropland, irrigated land and hayland in their locality. Cash rental rates for pasture/rangeland were provided on a per acre basis and, if possible, on a per AUM (Animal Unit Month) basis. Cash rental rates (average and range of rates) by land use by region are summarized in Figure 9, Figure 10 and Table 3). The same information is summarized by region and county cluster in Table 3A.

Cash rental rates per acre are quite variable within each region and highly variable among South Dakota regions. Within each region, the average annual cash rental rates are highest for irrigated land, followed by cropland, hayland and pasture/rangeland. For each land use, cash rental rates are highest in southeast and east central South Dakota and lowest in northwest and southwest South Dakota (Figures 9 and 10).

Cash Rental Rates - Cropland, Hayland and Irrigated Land

Cash rental rates vary substantially by region and land use. For example, 1992 nonirrigated cropland average cash rental rates vary from \$15.10 - \$17.70 per acre in western South Dakota to \$21.40 - \$25.50 per acre in the central regions of South Dakota. Cropland cash rental rates range from an average of \$39.70 in northeastern South Dakota, to \$45.70 in east central South Dakota and \$48.00 in the southeast region (Figure 9 and Table 3). Average cash rental rates are \$63.50 - \$64.90 per acre for cropland in the Minnehaha-Moody and Clay-Lincoln-Turner-Union county clusters (Table 3A).

Irrigated land average cash rental rates vary from an average of \$46.50 - \$48.80 per acre in the western and central regions of South Dakota to \$70 per acre in the east central region and \$85.20 per acre in the southeast region. Average irrigated cash rental rates are highest at \$95.70 per acre in the Clay-Lincoln-Turner-Union county cluster. Many reporters indicated that few irrigated tracts in their locality were cash leased and their reports were based on few actual irrigated land leases.

Hayland acre cash rental rates in 1992 vary from an average of \$11.40 - \$12.10 in western South Dakota to \$33.30 in the southeast region. They exceed \$50 per acre in some southeastern counties where a commercial alfalfa hay market has developed.

The variation in reported cash rental rates is greatest in the eastern regions of South Dakota. For example, reported rates for nonirrigated cropland in the southeast region vary from \$28 per acre to \$80 per acre. Similarly, reported rates for hayland in the southeast region vary from \$15 per acre to \$90

per acre. In most regions, the lower cash rental rates for hayland represented reports for native hayland and less productive tame hayland, while the medium-higher rates were quoted for good quality alfalfa hayland.

From 1991 to 1992, cropland cash rental rates increased an average of \$1.60 - \$1.80 per acre in western South Dakota, while cropland cash rental rates slightly declined (-\$0.50 to -\$1.30 per acre) in the southeast, central and south central regions of South Dakota (Table 3). Since 1986, cropland cash rental rates have increased an average of \$6 - \$9 per acre in the southeast, east central, south central and southwest region and have increased an average of \$2 - \$5 per acre in other regions of South Dakota (Peterson and Janssen, 1988).

Hayland cash rental rates declined in most regions of South Dakota, with the greatest declines reported in eastern regions of South Dakota (-\$2.30 to -\$5.20 per acre). The major reason for declining rates is lower hay prices.

Reported cash rental rates for irrigated land increased substantially by +\$7 to +\$12 per acre in western, central and northeast regions of South Dakota. Irrigated land cash rental rates slightly increased in the east central and southeast regions.

Cash Rental Rates - Rangeland and Pastureland

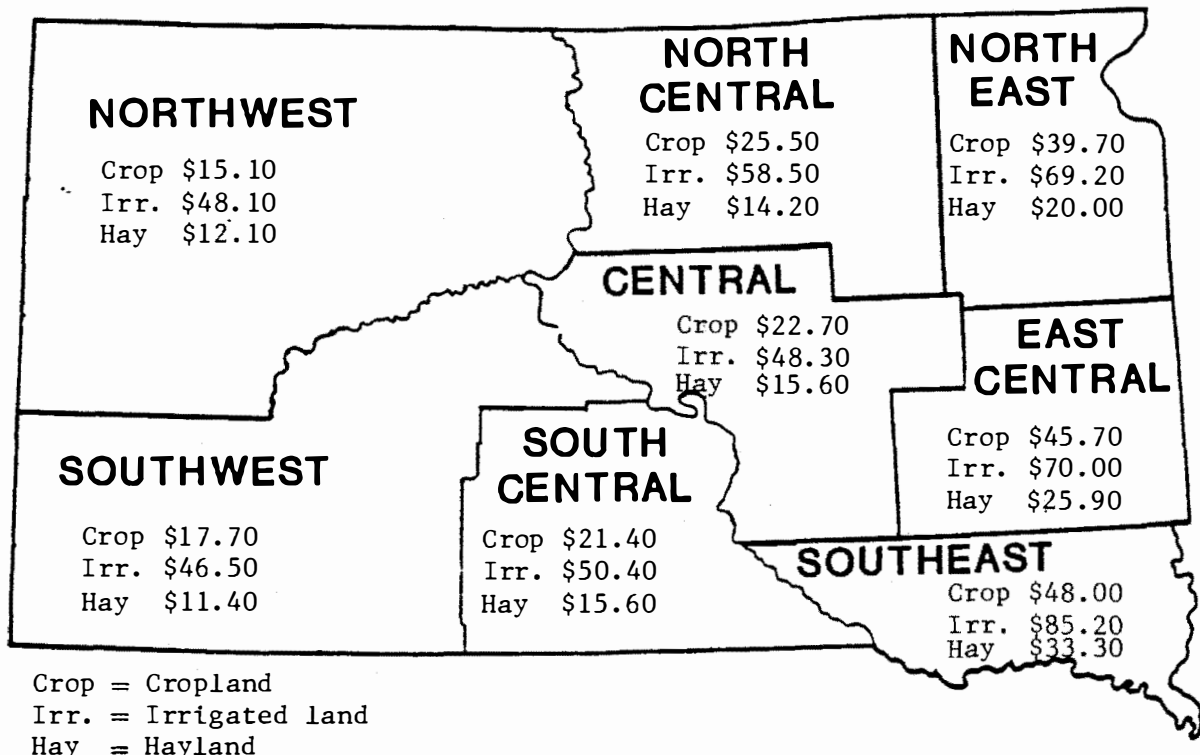
More than three-eighths of South Dakota's 26 million acres of rangeland and pastureland acres are leased to farmers and ranchers. Several million acres of rangeland in western and central South Dakota are controlled by Federal, state or tribal agencies and are leased to ranchers using cash leases or grazing permits. However, a majority of leased rangeland and almost all leased pastureland are from private landlords (Cole, Beutler and Janssen, 1990).

Most private landlords use cash leases for rental of rangeland and pastureland. Respondents were asked about 1992 cash rental rates per acre and per AUM on privately owned rangeland and pastureland in their locality.

Average cash rental rates reflect regional differences in productivity and carrying capacity of pasture and rangeland tracts. Cash rental rates vary from \$4.90 - \$5.30 per acre in western South Dakota to \$18.00 - \$19.60 in east central and southeast South Dakota. The range of per acre cash rental rates varies from \$3 - \$10 per acre in western South Dakota to \$13 - \$28 per acre in east central South Dakota (Figure 10 and Table 3).

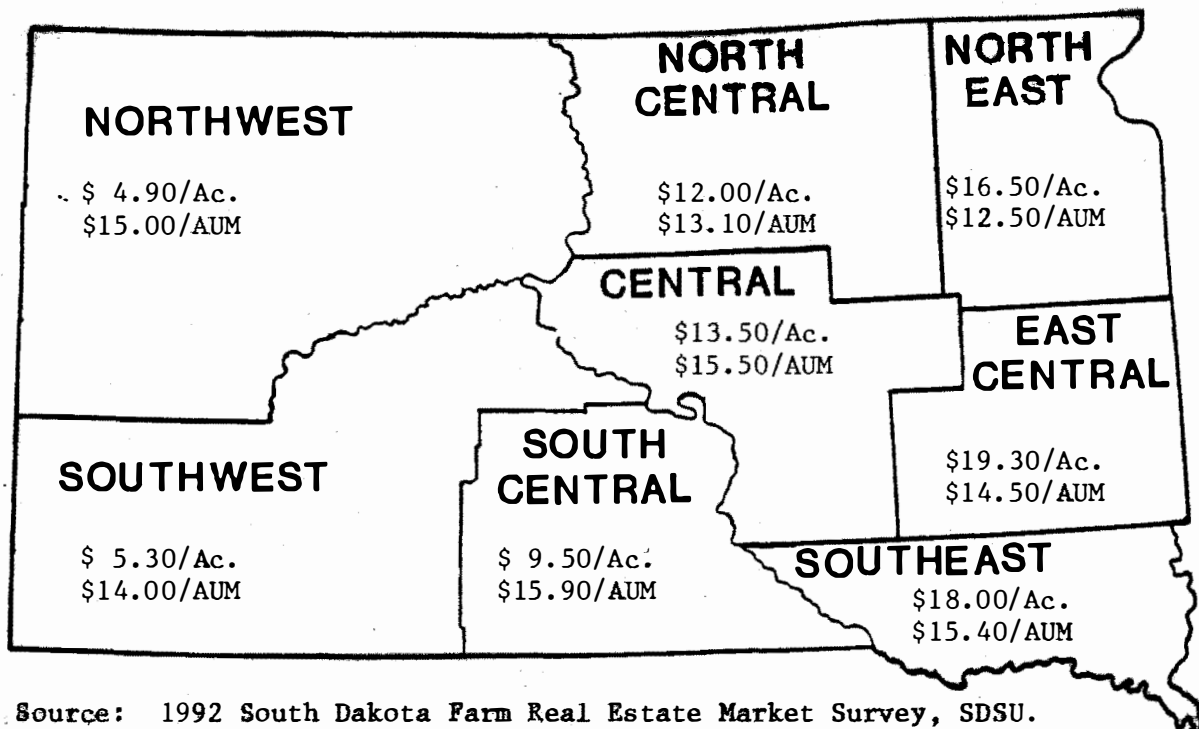
Animal Unit Month (AUM) is the amount of forage required to maintain a mature cow with calf for 30 days. An AUM is somewhat of a "generic" value and should be about equal in different regions. Therefore, private cash lease rates quoted on a per AUM basis should be roughly equivalent in different areas of the state unless there are major regional differences in forage availability, forage quality, water availability and demand for leased rangeland. Rangeland rates per AUM in 1992 are fairly uniform across South Dakota, averaging \$12.50 per AUM in the northeast region, to \$15.90 per AUM in the south central region.

Figure 9. Average Cash Rental Rate of South Dakota Dryland Cropland, Irrigated Land and Hayland, by Region, 1992 Dollars per Acre.



Source: 1992 South Dakota Farm Real Estate Market Survey, SDSU.

Figure 10. Average Cash Rental Rate of South Dakota Rangeland and Pastureland by Region, 1992, Dollars Per Acre and Dollars Per AUM.



Source: 1992 South Dakota Farm Real Estate Market Survey, SDSU.

Table 3. Reported Cash Rental Rates of South Dakota Agricultural Land by Type of Land
by Region, 1992 Rates

Type of Land	South- east	East Central	North- east	North Central	Central	South Central	South- west	North- west
-----dollars per acre-----								
Dryland Cropland								
Average 1992 rate	48.00	45.70	39.70	25.50	22.70	21.40	17.70	15.10
Range of 1992 rates	28-85	20-80	28-60	15-40	18-30	14-30	10-32	8-20
Average 1991 rate	49.30	43.20	38.50	24.50	23.20	22.20	15.90	13.50
Irrigated Land								
Average 1992 rate	85.20	70.00	69.20	**	48.30	**	46.50	48.10
Range of 1992 rates	50-125	55-100	50-115	**	25-75	**	25-75	25-85
Average 1991 rate	82.70	69.00	59.00	**	41.70	**	35.10	39.00
Hayland								
Average 1992 rate	33.30	25.90	20.00	14.20	15.60	15.60	11.40	12.10
Range of 1992 rates	15-90	15-50	10-55	8-20	8-23	8-23	6-22	6-20
Average 1991 rate	38.50	30.90	22.30	14.20	15.70	14.80	12.10	10.40
Pasture/Rangeland								
Average 1992 rate	18.00	19.60	16.50	12.00	13.50	9.50	5.30	4.90
Range of 1992 rates	10-25	13-28	10-25	8-16	5-20	5-15	3-10	3-7
Average 1991 rate	19.20	18.60	16.30	12.50	13.80	9.90	5.30	4.40
-----dollars per Animal Unit Month-----								
Average 1992 rate	15.40	14.50	12.50	13.10	15.50	15.90	14.00	15.00
Range of 1992 rates	11-25	8-20	8-16	10-16	13-18	13-18	11-18	12-20

Table 3A. Reported Cash Rental Rates of South Dakota Agricultural Land by Type of Land
by Region and County Clusters, 1992 Rates.

	Southeast				East Central			
	All	Clay Lincoln Turner Union	Bon Homme Hutchinson Yankton	Charles Mix Douglas	All	Minnehaha Moody	Brookings Lake McCook	Davison Hanson Kingsbury Miner Sanborn
	-----dollars per acre-----							
Dryland cropland								
Average 1992 rate	46.00	64.90	44.20	30.40	45.70	63.20	43.40	31.00
Range of 1992 rates	26-65	35-65	33-65	26-35	20-60	50-60	30-60	20-50
Average 1991 rate	49.30	63.90	45.30	32.70	43.20	61.30	40.20	32.00
Irrigated Land								
Average 1992 rate	65.20	95.70	92.80	60.00	70.00	**	65.60	**
Range of 1992 rates	50-125	65-125	65-125	50-90	55-100	**	55-80	**
Average 1991 rate	82.70	93.00	87.50	55.70	69.00	**	67.90	**
Hayland								
Average 1992 rate	33.30	52.10	31.60	20.60	25.90	33.30	23.30	21.90
Range of 1992 rates	15-90	20-90	15-60	15-50	15-50	20-50	20-30	15-35
Average 1991 rate	38.50	54.00	37.60	23.10	30.90	45.20	27.60	26.20
Pasture/Rangeland								
Average 1992 rate	18.00	21.20	17.40	16.90	19.60	21.50	18.60	19.60
Range of 1992 rates	10-25	13-25	10-25	11-20	13-28	15-28	15-23	13-25
Average 1991 rate	19.20	21.40	18.20	20.00	18.60	22.30	16.60	19.00

** Insufficient number of reports

Source: South Dakota Farm Real Estate Market Surveys, SDSU, 1992 and 1991

Table 3A-Continued

	Northeast				North Central			
	All	Codington Deuel Hamlin	Grant Roberts	Clark Day Marshall	All	Brown Spink	Edmund Faulk McPherson	Campbell Potter Walworth
	-----dollars per acre-----							
Dryland cropland								
Average 1992 rate	39.70	41.20	44.50	35.50	25.50	32.70	19.90	23.10
Range of 1992 rates	28-60	30-50	35-60	28-48	15-40	22-40	15-25	17-28
Average 1991 rate	38.50	40.90	42.80	31.90	24.50	31.60	20.30	22.10
Irrigated Land								
Average 1992 rate	69.20	76.30	65.00	54.40	**	**	**	**
Range of 1992 rates	50-115	58-115	60-75	50-65	**	**	**	**
Average 1991 rate	59.00	63.90	62.20	48.50	**	**	**	**
Hayland								
Average 1992 rate	20.00	18.60	24.20	19.60	14.20	16.90	12.30	13.30
Range of 1992 rates	10-55	11-35	10-55	12-35	8-20	13-23	8-15	10-20
Average 1991 rate	22.30	22.80	21.90	19.80	14.20	16.70	13.00	12.30
Pasture/Rangeland								
Average 1992 rate	16.50	17.80	15.90	15.90	12.00	13.80	11.80	11.10
Range of 1992 rates	10-25	10-25	12-20	10-25	8-16	10-20	8-17	8-17
Average 1991 rate	16.30	18.20	15.10	14.60	12.50	14.60	12.70	9.30

Table 3A-Continued

	Central				South Central	South- west	North- west
	All	Aurora Beadle Jerauld	Buffalo Brule Hand Hyde	Hughes Sully	All	All	All
	-----dollars per acre-----						
Dryland cropland							
Average 1992 rate	22.70	25.00	22.80	20.50	21.40	17.70	15.10
Range of 1992 rates	18-30	18-35	19-28	18-26	14-30	10-32	8-20
Average 1991 rate	23.20	27.30	21.80	21.40	22.20	15.90	13.50
Irrigated Land							
Average 1992 rate	52.30	55.00	**	51.10	50.40	46.50	48.10
Range of 1992 rates	25-100	30-100	**	35-70	22-110	25-75	25-85
Average 1991 rate	41.70	**	**	**	**	35.10	39.00
Hayland							
Average 1992 rate	15.60	18.30	15.00	11.70	15.60	11.40	12.10
Range of 1992 rates	8-23	14-23	11-23	8-15	8-23	6-22	6-20
Average 1991 rate	15.70	17.30	14.90	14.00	14.80	12.10	10.40
Pasture/Rangeland							
Average 1992 rate	13.50	16.40	13.40	8.50	9.50	5.30	4.90
Range of 1992 rates	5-20	14-20	10-20	5-13	5-15	3-10	3-7
Average 1991 rate	13.80	16.50	12.90	10.40	9.90	5.30	4.40

Average cash rental rates for rangeland have increased in the northwest region, but have not changed much in other regions of central and western South Dakota. Average per AUM rental rates have declined in the east central and northeast regions, while per acre rental rates have declined an average of \$-1.20 in the southeast region. Cow-calf enterprises are generally profitable, but have experienced some downward pressure on calf prices and profits. This has resulted in few major changes in rangeland rental rates.

From 1988 to 1992, private cash lease rates quoted on an AUM basis have increased an average of \$1.50 - \$5.00 per AUM in most regions of South Dakota. Per acre cash lease rates have also increased, although the average dollar amount varies greatly by locality.

RATES OF RETURN TO AGRICULTURAL LAND

Two approaches were used in the 1991 and 1992 surveys to obtain information on current rates of return to agricultural land in South Dakota.

First, respondents were asked to estimate the current net rate of return (percent) that landowners in their locality could expect given current land values. Appraisers refer to the current annual net rate of return as the market-derived capitalization rate, which is widely used in the income approach to farmland appraisal. The net rate of return is a return to agricultural land ownership after deducting property taxes, maintenance, and other ownership expenses.

The statewide average estimated net rate of return on all-agricultural land declined from 6.6% in 1991 to 5.8% in 1992. The statewide average net rate of return declined by 0.5 percentage points for nonirrigated cropland, and declined by 1.0 percentage points for rangeland, pastureland, and hayland. Furthermore, net rates of return to agricultural land declined in all eight regions of South Dakota.

The lowest average net rates of return for cropland, hayland and rangeland are reported in the southwest region (4.5% - 5.5%), while the highest net rates of return are reported in the northeast region (6.3% - 6.9%). In most regions, average current net rates of return to each land type were between 5.1 - 6.8% (Table 4).

Second, respondents reported cash rental rates and estimated the value of leased land by land use. From this information, we calculated the rent-to-value ratio for each response. This is a measure of the gross rate of return obtained by landlords, before real estate expenses (property taxes, insurance, maintenance and related expenses) are deducted. The calculated rent-to-value ratio should exceed the respondent's estimated current net rate of return to landownership. This expected result occurred for each land use in all regions (Table 4).

The statewide gross cash rent-to-value ratio for nonirrigated cropland and hayland is slightly above 8.0%, while the rangeland rent-to-value ratio is 7.0%.

From 1991 to 1992 there were minimal changes in most rent-to-value ratios. In most regions, the average gross cash rent-to-value ratios by type of land were:

nonirrigated cropland	= 7.6% to 8.4%;
rangeland	= 6.3% to 8.0%;
hayland	= 7.5% to 9.5%;

In most regions, the differences between the calculated rent-to-value ratio and the estimated net rate of return increased from 1.0 - 1.9 percentage points in 1991 to 1.4 - 2.4 percentage points in 1992. This reflects rising costs of agricultural land ownership, which includes substantial increases in property taxes levied in many South Dakota counties and school districts.

The current net rate of return to agricultural land of 5.3% - 6.3% is considerably lower than farmland mortgage interest rates of 9.5% - 11.0%. This implies that relatively large downpayment requirements are necessary before farmland purchases can be expected to cashflow from net returns.⁵ Fortunately, a high percentage of current farmland purchases are financed with equity capital and most debt financed purchases have relatively high downpayments. This cautious approach to debt-financing will help most farmland buyers avoid another financial crisis.

AGRICULTURAL LAND VALUE EXPECTATIONS FOR 1992

Respondents were asked about their expectation of changes in agricultural land values in 1992.

A majority (52%) of respondents expected stable agricultural land values during the remainder of 1992. Another 34% expected some increase in land values averaging 5.4%. A minority (7%) expected land value declines averaging 6% and the remainder (7%) offered no opinion. Respondents in the southeast, south central and central region of South Dakota were less likely to expect further increases in land values.

Many respondents commented that lower long-term interest rates and reduced yields on other investments should stabilize or increase agricultural land values in the next 12 months. Continued profitability of cow-calf enterprises may cause some increases in rangeland and pasture values. Respondents from the wheat farming regions generally expect cropland values to increase in the next 12

⁵ For example, a 49% downpayment (initial equity payment as percent of purchase price) is required to cash flow a 20-year fully amortized farm real estate loan, assuming a 10% annual interest rate, annual loan payment factor of 11.75% of purchase price and a 6% annual net rate of return to farmland. At prevailing farm mortgage interest rates of 9.5% - 11.0% and net rates of return of 5.3% - 6.3%, farmland investors need to make downpayments from 40% - 55% of purchase price if they wish to cash flow farmland purchases from net earnings in the initial years of ownership.

months, while cropland values are expected to remain stable or decline slightly in eastern South Dakota.

Overall, respondents' land market expectations for 1992 are similar to their expectations for 1991 which turned out to be fairly accurate. If respondents' expectations for 1992 are realized, we will see another year of stable to slight increases in agricultural land values and possible declines in inflation-adjusted farmland values. The survey results for 1991 - 1992 and forecasts for the next 12 months, indicates the major rebound in agricultural land values that occurred between 1987-1991 is over.

Table 4. Estimated Rates of Return to South Dakota Agricultural Land by Type of Land by Region.

Region	Dryland Cropland		Rangeland and Pastureland		Hayland		All Agricultural Land ^{c,d}	
	1991	1992	1991	1992	1991	1992	1991	1992
-----Average annual net rate of return (percent) ^a -----								
Southeast	6.8	6.5	6.8	5.5	7.4	5.4	6.9	6.2
East Central	6.5	6.2	6.0	5.1	6.3	5.2	6.4	5.8
Northeast	7.3	6.8	6.6	6.9	7.1	6.3	7.1	6.8
North Central	7.4	6.5	7.3	5.5	7.0	5.5	7.8	6.1
Central	6.6	5.6	6.3	5.1	6.0	5.1	6.4	5.3
South Central	7.3	6.0	7.4	5.7	8.4	6.1	7.5	5.8
Southwest	5.2	5.5	5.1	4.5	5.2	5.2	5.2	4.8
Northwest	6.6	6.8	6.1	5.3	7.0	6.7	6.3	5.7
State ^c	6.8	6.3	6.3	5.3	6.8	5.8	6.6	5.8
---Average ratio of gross cash rent to reported land value (percent) ^b ---								
Southeast	7.9	8.0	7.6	6.8	8.2	7.8	7.9	7.7
East Central	7.8	7.9	7.3	7.5	8.4	7.9	7.7	7.7
Northeast	8.7	8.4	7.9	7.6	8.3	8.5	8.4	8.7
North Central	8.3	8.3	8.4	8.0	8.4	8.2	8.4	8.2
Central	7.7	7.6	8.3	7.8	8.5	7.5	8.1	7.8
South Central	8.4	7.6	6.8	6.9	7.6	8.0	7.3	7.2
Southwest	8.1	9.0	7.2	6.3	9.1	9.2	7.6	7.2
Northwest	8.6	8.6	6.5	6.7	9.8	9.5	7.1	7.2
State ^c	8.2	8.1	7.2	7.0	8.6	8.4	7.7	7.6

Source: 1992 South Dakota Farm Real Estate Survey, SDSU.

^aThis measure was reporters estimate of percent rate of net return to ownership given current land values. Appraisers often refer to it as the market capitalization rate.

^bThis percentage measure was calculated by dividing reporters average cash rental rate by their reported land use.

^cState level net rate of return and rent-to-value ratio estimates are calculated by weighing regional estimates by proportion of acres of each land use by region. Regional level net rate of returns and rent-to-value ratio estimates are calculated by weighing rate of return (rent-to-value ratio) estimates for each land use by proportion of the regions agricultural acres in each land use.

^dRates of return to irrigated land are not reported by region due to insufficient number of reporters estimates in most regions. The statewide average net rate of return to irrigated land was 8.0%.

LIST OF REFERENCES

- Cole, John; Martin Beutler and Larry Janssen. 1990. "Pasture/Rangeland Lease Characteristics and Rental Rates." Economics Commentator, No. 282, Economics Dept. South Dakota State University (SDSU), Brookings, SD.
- Janssen, Larry and Burton Pflueger. 1991. South Dakota Farm Real Estate Values and Rental Rates: 1991. SDSU Economics Research Report 91-3. Brookings, SD. June.
- Janssen, Larry. 1988a. South Dakota Farmland Values and Sale Prices - Long Term and Recent Trends: Statewide, Regional and Selected Counties. SDSU Economics Research Report 88 - 1. Brookings, SD. February.
- Janssen, Larry. 1988b. South Dakota Cropland and Rangeland Sales - Statewide and Regional, 1971 - 1987. SDSU Economics Research Report 88 - 2. Brookings, SD. June.
- Johnson, Bruce. 1990. Nebraska Farm Real Estate Market Developments, 1989 - 90 Ag Economics Report 162. University of Nebraska, Lincoln, Nebraska. July
- Johnson, Jerome. 1991. "North Dakota Farmland Values in 1990" and "Cash Rents Continue Adjusting". North Dakota Farm Research. North Dakota State University, Fargo, ND. Vol. 48, No. 4. p. 9 - 17.
- Peterson, Scott R. and Larry Janssen. 1988. Farmland Leasing in South Dakota. SDSU Ag. Expt. Station Bulletin 704. Brookings, SD. December.
- U.S. Department of Agriculture. 1992. Agricultural Resources: Agricultural Land Values - Situation and Outlook Summary. Washington D.C. April. (and earlier issues)
- U.S. Department of Agriculture. 1991. Agricultural Resources: Agricultural Land Values and Markets - Situation and Outlook Report. AR-22. Washington D.C. June. (and earlier issues)

APPENDIX: SURVEY METHODS AND RESPONDENT CHARACTERISTICS

The primary purposes of the 1992 South Dakota Farm Real Estate Market Survey were to obtain regional and statewide information on: (1) 1992 per acre agricultural land values by land use and land productivity (average quality, high productivity and low productivity land in each use), and (2) 1992 cash rental rates by agricultural land use. These tasks could be accomplished with a two page questionnaire shown at the end of this appendix. The 1992 survey did not obtain information on share rental practices, farm building values, or detailed information on actual farmland sales. The 1992 survey instrument is virtually identical to the pilot survey instrument used in 1991.

Copies of this survey were mailed to potential respondents about February 20 with a followup mailing on March 12. Potential respondents were persons employed in one of the following occupations: (1) agricultural lenders (senior agricultural loan officers of commercial banks, Farmers Home Administration, or Farm Credit Banks), (2) Cooperative Extension agricultural agents and farm management field staff, and (3) licensed appraisers (including members of professional rural appraisal and farm management societies). Some appraisers were primarily realtors, auctioneers or professional farm managers.

The useable survey response rate was 43% of 600 persons contacted. The distribution of 258 respondents by reported occupation are shown in Appendix Table 1. Nearly 70% of Extension agents, 50% of agricultural lenders and 30% of licensed appraisers contacted provided useable responses. The useable response rate of licensed appraisers was considerably lower because many appraisers are primarily involved with residential and commercial real estate.

Nearly three-fourths of the respondents to the 1992 survey were also respondents to the 1991 survey. Most of the new respondents are agricultural loan officers. There are no major differences in the regional distribution of respondents to the 1991 survey and to the 1992 survey.

Most respondents were able to supply land value and cash rental rate information for nonirrigated cropland, rangeland, and hayland in their locality. However, only about one-third of the respondents provided information on irrigated land.

Nearly half of the respondents were from the eastern regions of South Dakota, 30% were from the three regions of central South Dakota and 20% were from western South Dakota. Most Extension agents and agricultural lenders reported on land market conditions in one county, while many appraisers reported on land market conditions in 2-3 adjacent counties in the same region. Each useable response by land use was counted once in developing average land values by region or county cluster.

Regional average land values by land use are simple average (mean) values of useable responses. All-agricultural land values, statewide and regional, and statewide average land values by land use are weighted by the relative number of acres in each agricultural land use. This approach has important implications in the derivation of statewide average land values and regional all-land values. For example, the three eastern regions of South Dakota with the highest average land values have nearly 45% of the State's cropland acres, 27% of all-agricultural land acres and only 10% of rangeland acres. Consequently, the relative importance of various regions on statewide cropland, rangeland and all-land values varies greatly by land use.

We believe this weighted average approach to statewide land values is preferable to a simple average (mean) of all responses. This alternate approach would greatly increase the relative importance of eastern South Dakota land values in the final computations and considerably increase our estimates of statewide average land values.

The weighting factors used to develop statewide average land values are based on estimates of agricultural land use for privately owned farmland in South Dakota. It excludes agricultural land (mostly rangeland) leased by tribal or Federal agencies which primarily occurs in the western and central regions of the State. The weighting factors were developed from county-level data on taxable agricultural acres, farmland use data from the 1987 South Dakota Census of Agriculture and other sources.

Comparisons between land values and cash rental rates from 1991 to 1992 (by land use and region/county cluster) are based on summary statistics (mean, range, etc.) from each annual survey. Consequently, the percentage change in land values and rental rates reported in this publication are based on "actual" dollar values reported in each survey. This reported percentage change often differs from the percentage change estimated by each respondent in the 1992 survey. However, the respondents perception of changes is a useful cross-check to their reports of specific dollar amounts.

Appendix Table 1. Selected Characteristics of Respondents

Number of Respondents = 285

Respondents:

<u>Reporting Location</u>	<u>N</u>	<u>%</u>	<u>Primary Occupation</u>	<u>N</u>	<u>%</u>
Southeast	40	15.4	Banker/Loan Officer	144	55.8
East Central	52	20.2			
Northeast	37	14.2	Realtor	29	11.2
North Central	27	10.5	Appraiser	36	14.0
Central	34	13.2			
South Central	16	6.2	Extension Agents	<u>49</u>	<u>19.0</u>
Southwest	27	10.5	Total	258	100.0
Northwest	<u>25</u>	<u>9.7</u>			
Total	258	100.0			

Response Rates:

<u>Land Values</u>	<u>N</u>	<u>%</u>	<u>Rental Rates</u>	<u>N</u>	<u>\$</u>
Dryland Cropland	237	91.9	Dryland Cropland	246	95.3
Irrigation Land	75	29.0	Irrigation Land	88	34.1
Hayland	184	71.3	Hayland	207	80.2
Rangeland (native)	216	83.7	Rangeland per Acre	203	78.9
Pasture (tame)	158	61.2	per AUM	83	32.2

1992 SOUTH DAKOTA FARM REAL ESTATE MARKET SURVEY
South Dakota State University, Economics Department
 (All replies will be handled on a strictly confidential basis)

Please return completed survey in the business reply envelope to Dr. Larry Janssen, Dept. of Economics, SOUTH DAKOTA STATE UNIVERSITY, Brookings, SD.

PART I: CURRENT FARM REAL ESTATE MARKET SITUATION

A. For the following types of farm or ranch real estate that are typical and which you are familiar with in your surrounding area, please report your estimate of average values per acre as of Feb. 1st. Please list the county or counties included in this report:

COUNTY(s) _____	February 1, 1992 (current value)	Estimated Percentage Change in Value over the Past 12 Months
Dryland Cropland.....	\$ _____/acre	_____ %
Hayland.....	\$ _____/acre	_____ %
Grassland		
Native Pasture.....	\$ _____/acre	_____ %
Tame (Improved) Pasture..	\$ _____/acre	_____ %
Irrigated land	\$ _____/acre	_____ %

B. In your opinion, what are the major reason(s) for an increase (or decrease) in agricultural land values over the past year? _____

C. Please report the range in current average per acre values of those types of farm or ranch real estate with which you are familiar. For example, high productivity land would usually have above average yields in your locality, while low productivity land would usually have below-average yields.

	Estimated current value, February 1, 1992	
	Low Productivity Land	High Productivity Land
Dryland Cropland.....	\$ _____/acre	\$ _____/acre
Hayland.....	\$ _____/acre	\$ _____/acre
Grassland		
Native.....	\$ _____/acre	\$ _____/acre
Tame (improved)	\$ _____/acre	\$ _____/acre
Irrigated Land	\$ _____/acre	\$ _____/acre

D. Given the land values reported in (A) and (C) above, what is your estimate of the current net rate of return (%) that a landowner could expect? (Appraisers refer to this as the market capitalization rate)
 Cropland _____%, Hayland _____%, Rangeland _____%, Irrigated land _____%

E. Relative to 1991, I would expect the average value of farmland/ranchland in my area during 1992 to increase by _____ percent or decrease by _____ percent or remain the same _____ (check).

PART II: CURRENT FARM REAL ESTATE RENTAL MARKET SITUATION

A. Please report your estimates of 1992 cash rental rates and the associated market values for the following types of rented land in your area.

	Cash Rental Rates for 1992	Estimated Market Value of Land
Dryland cropland.....	\$_____/acre	\$_____/acre
Hayland.....	\$_____/acre	\$_____/acre
Rangeland...\$	_____/acre or \$_____/AUM	\$_____/acre
Irrigated land	\$_____/acre	\$_____/acre

B. Relative to a year ago, cash rental rates in your area for:

CROPLAND increased by ____% or decreased by ____% or remained the same__ (check)
HAYLAND increased by ____% or decreased by ____% or remained the same__ (check)
RANGELAND increased by ____% or decreased by ____% or remained the same__ (check)

PART III: FARM REAL ESTATE MARKET ACTIVITY.

A. The number of farm (ranch) tracts sold in your area during the past year: increased by ____% or decreased by ____% or remained the same ____ (check).

B. What have been the most important reasons among buyers for purchasing farmland (ranchland) in your area this past year?

1. _____
2. _____

C. What have been the most important reasons among sellers for offering farmland (ranchland) for sale during the the past year?

1. _____
2. _____

D. Relative to 1991, I would expect the number of farms/ranches and farmland/ ranchland tracts offered for sale in 1992 to increase by ____percent or decrease by ____percent or remain the same ____ (check).

E. Please indicate your main occupation(s).

- (1) Broker/ Realtor____ (2) Appraiser____ (3) Auctioneer____
(4) Banker/ Loan Officer____ (5) County Agent____
(5) If other, please specify_____

D. Other comments you would like to offer. _____

Thank you very much for your time and effort in completing this survey. We plan to send each respondent a copy of the results. If your name/address label needs to be corrected in any way, please write the correct information.

Name _____

Address _____

Phone _____